Performance and Participation: A Qualitative Study of Music Education Practices in Digitally-Based Musicking with Young People with Physical Impairments

Bo Nilsson

Abstract

This article highlights results from a research study of 'Music Week'; a one-week Swedish music project performed at a Swedish folk high school, a Nordic-style residential adult education college. The aim of the Music Week project was to enable young people with physical impairments to take part in musical activities. Digitally-based musical settings were used in order to provide tools for both performing and creating music. The Music Week project was part of a larger 3-year music project.

The main purpose of the present research study was both to explore the interaction and the music education practices applied during the Music Week project as well as to explore the musical settings used within the project. The research method was partially inspired by ethnographical methods. In the study, two main variations of teaching music in groups were identified: i) Performance-oriented, with a clear goal of performing songs for an audience and ii) Participatory-oriented, where the participants were able to explore their potential to play and create music. Furthermore, the results suggest that musical settings should be regarded in a holistic way to include all kinds of resources: musical, technical, physical, psychological and personal.

Keywords: musicking; music education; accessibility; digital music instruments; impairment; health promotion; interaction; cultural awareness; young people

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Introduction

Research on music and physical impairments is often performed within the area of music therapy, typically defined as a profession and practice concerned with therapeutic ends (Ruud 2008). Bonde (2011) maintains that individuals will establish a physical, psychological or spiritual relationship with music regardless of the presence of, for example, a music therapist, community musician or music educator. Ruud argues that music therapy is often recognised as a practice associated with interventions, and governed by biological and neuropsychological explanations of human behaviour in relation to music. This is about to change, according to Ruud, who maintains that music therapy has become a field in which we can study how music can be used to promote health and well-being. Ruud concludes that "music therapy takes part in reclaiming some of the original functions of music in our culture" (Ruud 2008: 58).

The purpose of the Music Week project was to improve the potential for young people with

ISSN: 1791-9622

physical impairments to engage in everyday musical activities but with no aim to be a music therapy project. Nevertheless, with support from Ruud (2008) and Bonde (2011) above, it could be argued that music making and music creation will promote health even where they do not have this specific aim. Consequently, the Music Week project may be regarded as fulfilling some of the properties of music therapy described above; it is situated somewhere between music therapy, as described by Ruud (2008) and Bonde (2011), music pedagogy and health care.

The present research project, however, was performed from a mainly educational perspective.

Theoretical considerations

In order to understand the multifaceted character of musicking and musical learning, an *ecocultural* framework, developed by the author (Nilsson 2002, 2003, 2007; Nilsson & Folkestad 2005), was applied. This theoretical framework concerns learning and creative activities in everyday situations where physical and psychological tools mediate the world to the individual. In this perspective theories of play and flow are other important points of departure.

The concept of *musicking* was developed by Christopher Small in order to deal with what he calls the "trap of reification". Music is not a thing, he argues, but "something that people do" (Small 1998: 2). Small's definition of musicking is:

> "To music is to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composing) or by dancing" (Small 1998: 9).

Using Small's definition above it is obvious that musicking not only takes place when an individual plays a musical instrument or sings a song. Musicking also takes place when a personal assistant takes part in a musical situation for example, by managing computer software or interacting with his or her user.

Musical tools

From an eco-cultural perspective, musicking and musical learning are considered to be cultural practices where physical and psychological tools mediate the world to individuals who are engaged in practical activities (Vygotsky 1978). Musical instruments are obviously examples of such mediating tools. According to Blumer (1986), the meaning of an object is created by the way in which the individual is prepared to act in relation to the object. Consequently, objects other than musical instruments are able to mediate music if that is the user's intention. A switch for example can be used for many purposes; to close a door, turn on the light or trigger a sound on a computer (Figure 1).

In the present study, physical tools mainly took the form of musical instruments and technological artefacts designed to control musical events, including switches, computers or head-mouse equipment, whereas psychological tools were related to language, musical patterns and symbols such as a colour system indicating chord changes. The individual and the tool together constitute a system that is able to think, act and learn.

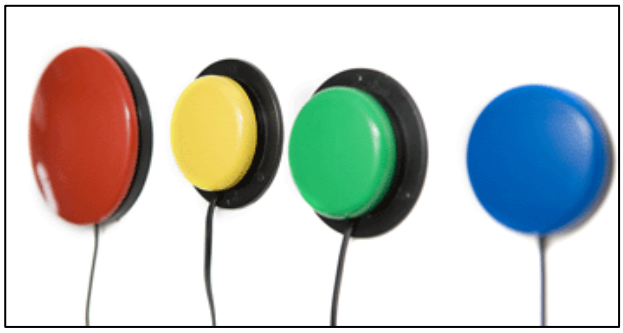

Figure 1: Switches can be used to trigger sounds on a computer or a sound module. The colour coding can, for example, symbolise different notes or chords

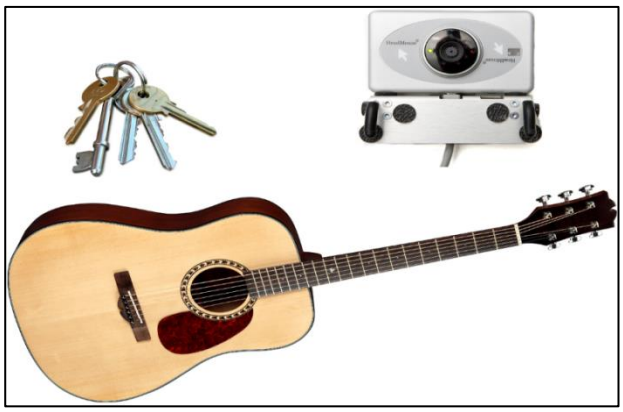

Figure 2: Different kinds of musical tools: A bunch of keys, a head-mouse connected to a computer and an acoustic guitar

Figure 2 shows the instruments actually played in a small improvised orchestra during a demonstration for parents to young people with impairments:

- Head mouse in combination with a computer and music software: a hi-tech artefact that can be played with a minimum of physical ability but still requires considerable training.
- Acoustic guitar: a traditional music instrument that requires a great deal of motor skill and

ISSN: 1791-9622

practice.

- Keys on a keychain: an improvised rhythm instrument created on the fly by using a utility article. This requires motor skill and some practice.

During the Music Week project, various musical instruments were used, some digitally-based and others more traditional.

Play and flow

Play is considered an important cultural practice and a way to create meaning in musical activities (Nilsson, 2003; 2005). It is, according to Huizinga (1955) and Caillois (1961), something we do for its own sake. An important component of Csikszentmihalyi's (1990;1994) *flow* concept concerns the balance between abilities and challenge, where the individual experiences a sense of control. Csikszentmihalyi calls this balance a *flow channel*. Play always includes uncertainty, as is pointed out by Huizinga (1955) and Caillois (1961). It seems reasonable to conclude that unpredictable events may play an important role in such creative processes as performing music, composing or improvisation.

Music and health

The Sense of Coherence framework (SOC) was developed by Antonovsky (1979, 1987) when applying a salutogenic approach to health research (Antonovsky 1996). Antonovsky describes an individual with a strong SOC as a person who experiences the world as: a) comprehensible, b) manageable, and c) meaningful. He proposes the SOC framework as a theoretical guide that can be used both for research as well as for intervention in health promotion. Antonovsky regards SOC as a dependent variable that can be manipulated as a means to "push people toward health" (Antonovsky 1996: 15).

Music therapy, as described by Ruud (2008), forms a link between *musicking* and health. Kaikkonen and Ala-Harja (2012) found in their study of the musical activities of 5 students with special needs a connection between musical activities and social interaction. They also found a connection to what they call *control over life*, which can be compared to Antonovsky's (1979, 1996) factors: comprehensible, manageable and meaningful.

The above described ecocultural perspective and the SOC framework may be used as a basis for discussion when considering music, impairments and health.

Musicking, disability and health

Active involvement in the culture of a society, such as *musicking*, is seen in the Music Week project as a form of freedom of speech and expression and may thus be regarded as a significant part of a democratic society.

Accordingly, our diverse aesthetic forms of expression are not to be regarded merely as some kind of extra 'silver lining' in our lives. The aesthetic dimension is important for us in many different ways, a standpoint recognised by the European Union, which in 2006 recommended 8 key competences for lifelong learning (European Union 2006). The 8th and final key competence entitled *Cultural awareness and expression* is described as:

> Appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, performing arts, literature, and the visual arts. (European Union 2006:18).

Essential knowledge, skills and attitudes related to this competence are defined in the recommendation as follows:

> "- Cultural knowledge includes an awareness of local, national and European cultural heritage and their place in the world.
>
> - Skills relate to both appreciation and expression: the appreciation and enjoyment of works of art and performances as well as self-expression through a variety of media using one's innate capacities.
>
> - A solid understanding of one's own culture and a sense of identity can be the basis of an open attitude towards and respect for diversity of cultural expression. A positive attitude also includes creativity, the willingness to cultivate aesthetic capacity through artistic self-expression and participation in cultural life" (European Union 2006: 18).

Understanding and appreciating cultural expressions are primary in the 8th key competence; interestingly, however, this also stresses the importance of self-expression and participation in cultural life. This is even more clearly expressed in Chapter 9 of The International Classification of Functioning, Disability and Health – ICF (WHO 2001), which discusses the actions and tasks required to engage in organised social life outside the family. Article d 9202 describes explicitly the following activities: "engaging in, or appreciating, fine arts or cultural events, such as going to the theatre, cinema, museum or art gallery, or acting in

ISSN: 1791-9622

a play, reading for enjoyment or playing a musical instrument" (WHO 2001: 169).

However, the right to participate in cultural events is also a question of inclusion in a wider sense. The Music Week project, as mentioned above, is a part of a larger music project, whose purpose is to develop musical platforms and events where people both with and without disabilities can make music together. Similar ideas are found in the choir *Voices*, which is a part of the German *DOMO: Musik* project (Merkt 2012).

In the Music Week project, experiencing, performing and creating music was considered basic human functions. Furthermore, the right to participate in different kinds of cultural and musical events, both as consumer and performer, was vital. The research study as a consequence adopted a salutogenic (Antonovsky 1996) rather than pathogenic approach.

Methodology and procedure

The research project was explorative in nature, aiming to explore the music teaching practices applied during the Music Week project, with special focus on the interaction between music educators and participants. A second aim was to explore the musical settings used in the project. The research method was partially inspired by ethnographical methods where the author participated as a researcher through participant observations (Geertz 1973; Hammersley & Atkinson 2003). Data were collected through video observations, interviews, digital photographs, conversation notes and fieldnotes.

During the Music Week project a total of 37 young people, 18-30 years of age from all over Sweden participated. All participants had some kind of physical impairments, some multiple. They were organised into different music groups, each with 5-8 participants and 1-3 teachers. The majority of participants were male. At the end of the week all groups gave a concert where the audience mostly consisted of friends and parents.

The music education staff consisted of 9 teachers, all experienced in playing music with students who have different kinds of impairments. Most of the teachers were familiar with such digital music tools as switches, head-mouse and computer applications (Figure 1 and 2). Also, some of the personal assistants actively participated in the musicking during the Music Week project.

The collected data were analysed together using a qualitative methodology. Passages of audio- and video-recordings relating to the research questions were transcribed and coded. All different kinds of data were treated as documents that had been indexed and summarised. There is always a risk that relevant material will be overlooked; this has to be weighed against general problems regarding managing large data collections (Hammersley & Atkinson 2003).

All participants, or in some cases their guardians, signed a consent form before participating in the project. No sensitive or personal data were collected or stored. The research data are protected under the Swedish Personal Data Act (SFS 1998: 204). The participants' anonymity and privacy were preserved and their names were changed to new aliases. It should also be noted that the name 'Music Week' is an alias.

Results

Two main variations in the music educators' musical practices were identified, one *performance-oriented* and the other *participatory-oriented*. The two identified variations of music education practices should not be regarded as mutually exclusive: it was shown that one musical situation often had qualities that applied to more than one practice. Also, the musical experience and competence of the tutor/teacher affected the collaborative music making.

a) Performance-oriented: The goal is to perform popular songs for an intended audience. The participants rehearse and practise before a concert.

b) Participatory-oriented: Involves the participants in musicking and music creation. The participants explore the potential of musical instruments as well as their own ability to create music.

The descriptions of the two main identified practices are further developed and expanded in the following and illustrated with excerpts from two transcribed video observations.

a) Performance-oriented

Within this practice, the primary goal of musical activity is normally to play 'well-known songs' that are familiar to both educators and participants. Examples from such a repertoire are songs from popular music genres such as rock, pop, Swedish dance band music or Eurovision Song Contest songs. The following is an excerpt from a transcribed episode where one teacher (Henry) instructs a group of participants in how to play *Rock Around the Clock*.

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Scenario

When we enter the room, the participants have been waiting for more than half an hour, during which time the teachers have rigged all the necessary equipment, speakers, amplifiers, synthesizers and drums. Cords are everywhere in the room. The teachers Henry and Brian play steel stringed acoustic guitars that are plugged into the speaker system. Henry takes the initiative and has a headset with a microphone. The group of 9 participants play various instruments, some using colour symbols taped on the keys. The lyrics and the colour coding for different chords are displayed on a large TV-screen and are controlled by Henry using foot switches: Red for the A-major chord, blue for D-major and green for E-major.

Many of the participants have personal assistants sitting at the back of the room who are not participating actively in the musicking.

Participant	Instrument	Colour coding
Torsten	acoustic drum kit	no
Ken	foot pedal keyboard connected to a synthesizer module.	yes
Martin	electronic drum pad, kazoo and microphone	no
Anita	singer with a microphone	no
Charlie	one switch placed on each side of his head	yes
Fredrik	synthesizer	yes
Hannah	head-mouse controls chords on her computer screen	yes
Hugo	switch controlling three different sound effects	no
Oscar	synthesizer	yes

Table 1: The first band participants and their instruments (with or no colour coding)

Henry takes a few chords on his guitar and begins to instruct:

- *In the beginning, it's red, then it is A* [plays A major chord].

Sings and plays:

- *One, two, three o'clock, four o'clock rock. Five, six, seven o'clock, eight o'clock rock. Nine, ten eleven o'clock, twelve o'clock rock. We're gonna...*

Henry stops:

- *And then it is blue...* [plays A chord again]. (His instructions were not right here, the correct instruction should have been to continue with "red" throughout the break.) Henry continues to sing and play:

-*... rock around the clock tonight. Put your... then it becomes red again.* Continues to sing:

- *Put your glad rags on and join me hun', we'll have some fun 'til the clock strikes one.*

Torsten plays a few notes on his snare drum.

Ken plays a D note (correct) on his keyboard in bar 5.

Henry's attention was directed towards performing the song and the colour coding. He did not interact with Torsten or Ken or recognise that they had managed to join in at their own initiative. The other members of the group did not participate.

Henry: *We're gonna… and now it is green* (plays a D-chord on his guitar) *around the clock tonight... back to red…* [plays A chord] *... rock rock rock 'til broad daylight, we're gonna... blue* (plays E chord)*… gonna... and then green again... round the clock tonight.* Henry ends with an A6 major chord.

Oscar plays a few notes on his synth.

Henry: *This really is your kind of song* (turns to Brian).

Henry performed the song on his own, and made eye contact only with his co-teacher Brian and did not interact with Oscar.

Henry now plays the entire song through, turned towards Brian: *We're gonna rock around the clock tonight, rock, rock, rock 'til broad daylight. We're gonna rock, gonna rock around the clock tonight...*

Ken joins with bass note D in bar 5, and then plays his bass part almost correctly for the remainder of the verse.

Torsten joins in on his drums in the very last bars of the song.

The other participants have been listening and did not participate.

Henry stops at the end of the verse.

Henry performed the song from the top on his own. He made no comment on the fact that Torsten and Ken had joined him at the end.

The musical activities in this practise could be described as preparation and rehearsal for a performance for the general public or, for example, friends, other music groups or family. The teacher, in this case Henry, took on the role of a bandleader, instructing, rehearsing and warming up the band for a concert. The participants tried to follow chord

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diagrams or other kinds of structured information such as colour coding. The lyrics become an important part of the performance as they held the structure together. The teacher dominated with his/her instrument and by singing through the speaker system. Almost all information went in one direction, from teacher to participant, with very little dialogue, as demonstrated in the excerpt from the transcribed video observation above.

When this practice is applied, the participants are almost totally relying on the teacher's initiative and very little is left for the participant to influence the musicking. The individual participant may have a feeling of importance when the rehearsed songs are performed for an audience and through the response from the audience.

b) Participatory-oriented

In the participatory-oriented practice, the participants were directly involved in musicking. Songs and structures may emerge during the process. The teachers try to adapt the various participants' roles in order to find a balance between challenge and capacity, thereby facilitating an experience of flow (Csikszentmihalyi 1990, 1994). Pulse, rhythm and structure may be included but are not always the most important values in the musicking. Singing may be improvisational and various kinds of additional technical voice systems could be applied. Some significant properties of a participatory-oriented practice are demonstrated in the following three short episodes.

Scenario

When we enter the room, the participants have tested their instruments and the teachers have made a sound-check. The two teachers, Johan and Gabor, play guitar and clarinet. Johan wears a wireless head microphone that allows him to move about in the room. His guitar is plugged into the speaker system. The musical material consists of the chorus from Bob Dylan's *Knockin' on Heaven's Door*, with the lyrics translated roughly into Swedish: "Knock, knock, knockin' on Rocking Hill" (chord progression: G – D – Am7 – Am7). Johan keeps to this chord sequence, which makes it possible to delimit the notes for a participant to two, i.e. D and C.

The participants are placed in a semi-circle, with their personal assistant seated close by. The assistants participate actively in the band.

Participant	Instrument	Colour coding	Assistants
Adam	keyboard and singing into a microphone	yes	two female assistants
Bill	singing into a microphone	yes	_
Claus	synth drums	no	_
David	three switches, two placed on either side of David's headrest. A third could be controlled by his knee, but was not used	yes	one male assistant
Evan	harmonica that Evan holds by himself	no	one female assistant holds a microphone
Gene	one switch	yes	one female assistant plays a second switch

Table 2: The second band participants, their instruments (with or no colour coding) and their assistants

> Johan plays the chord progression on his guitar and takes up the song:
>
> - *Knock, knock, knock on Rocking Hill. This phrase is repeated over and over.*
>
> The same chord progression being repeated throughout the whole session: G-D-Am-Am
>
> Johan: *Here we go, just Adam and me now.*
>
> Adam was sitting in his wheel chair with one assistant on either side. His assistant to the right holds a microphone next to his mouth. The assistant to the left uses Adam's left hand to press the 'correct' keys in accordance with the colour coding. Adam hums into the microphone. The assistant to the right wipes Adam's mouth with a red towel. Adam looks at the microphone, hums, and pays no attention to his left hand and the assistant holds his hand, pressing keys on the keyboard.
>
> - *Great!* says Johan.

Adam participated in the musical interaction by singing into the microphone and humming in phase with Johan's guitar accompaniment. The fragile moment of musical interaction was interrupted when one of Adam's assistants wiped Adam's mouth, thereby signalling, perhaps unconsciously or unintentionally, that the music was the secondary and social care the primary focus. Adam's other

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assistant seemed quite keen to follow the colour coding so that the correct notes could be played on the synth. Johan's immediate verbal response was "Great, Adam!" confirming that the short solo sequence was a collective action.

- *Bill!* It is now Bill's turn to play a solo with Johan.

- *Knock, knock, knock on Rocking Hill*, he sings into the microphone. - *Knock, knock, knock on Rocking Hill.*

- *Good!*

Bill and Johan maintained steady eye contact, ensuring musical interaction. Johan's "good" was at the same time both a musical and a verbal response. Bill's solo terminated when Johan gave a positive response.

- *And now David and me*, Johan continues.

David turns his head and plays with his two head switches. His assistant sits close to him, holds two drumsticks in his right hand and places them on David's right arm. The assistant plays the rhythm on David's armrests. David plays his two switches to change notes.

- *Red – blue*, Johan instructs David, *red – blue*. David turns his head and plays his two switches in accordance with Johan's coaching.

- *Very good, David*, says Johan.

This last short episode demonstrates how Johan, David and his assistant interacted in a small improvised trio. The assistant participated by keeping the pulse on David's arm rest. He then left the room for the musical interaction between David and Johan. Johan's "great David" confirmed their musical interaction and showed that David had managed to control his switches.

During the rest of the session all the participants got their chance to play a solo with Johan. The last one out was the assistant teacher Gabor, who played a solo on his clarinet with his eyes closed.

In the above described musical activities, participants explore and discover musical instruments and their possibilities, timbre, loco-motor, rhythm, etc. as well as their own ability to express themselves in music. Musicking takes place in communication between participants and teachers. This is a casual way to play music, where pulse and structure may not always be placed in the forefront of the music making process. Repetitive patterns, like an ostinato, such as the chord sequence from *Knockin' On Heavens Door*, provide opportunities for improvisations, turn taking and other such activities. The use of ostinati also helps the teacher to prevent the music from losing its form. It is often a challenge for the teacher to strike the right balance between freedom and structure. One of the teachers in the project stated that "it is quite fun to play the same chorus for forty-five minutes!"

The individual participant may have a feeling of belonging, experience his or her own significance for the group, and sense what it is like to be a co-creator of music.

Conclusion

The two identified main variations of working with music in groups seem indeed almost archetypal: i) *Performance-oriented*, with a clear goal of performing songs for an audience and ii) *Participatory-oriented*, where the participants were able to explore their potential to play and create music. The results suggest also that musical settings should be regarded in a holistic way to include all kinds of resources – musical, technical, physical, psychological and personal.

Creative processes are often hampered when participants interpret a situation as controlled (Nilsson 2002, 2003; Ericsson, Lindgren & Nilsson 2011). Extensive verbal instructions and a too rigid goal such as rehearsing popular songs for a concert may be conceived as restraining. The results of the present study suggest that a performance-oriented practice may fulfil the teacher's intentions at the cost of interaction, inclusion and creativity. The idea of making a concert might nevertheless be quite exciting even if the musicking rather tends to put the teacher in centre of the activity.

When musicking takes place in active interaction between teacher and participant this might create a balance between abilities and challenge. As the present article indicates, participatory-oriented musicking may improve creativity and improvisation. The use of ostinati prolongs musical activities, enabling participants to continue without interruption and contribute to balance in the flow channel (Csikszentmihalyi 1990, 1994).

Colour coding was used during all the above described musical episodes and appears to be a system that 'came along' with both identified practices, although stronger in the performance-oriented variation. The use of colour coding seemed to have little effect on the musicking. Using teaching methods based on playing by ear, which is to be seen as a quite powerful psychological musical tool, might further enhance the musicking.

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Musical accessibility

In the process of musicking the individual interacts with different kinds of musical, physical, psychological and personal resources. Also, factors such as plans, guidelines and principles of the surrounding society and environment may impact on accessibility in general, as discussed by Hedvall (2009). The way these suggestions of acting, *affordances* (Gibson 1979), offered by the environment are perceived and put into practice by the performer, defines *musical accessibility*.

From an eco-cultural perspective as described above, a musical instrument, is a system where the performer interacts with physical and psychological tools, forming a capable musical tool. The performer's memories, notions, knowledge and expectations interact with physical artefacts such as the digital setting, computer software, graphical interface, physical interface (e.g. head mouse) and other devices. The musical content can very briefly be described as a combination of musical ideas behind the setting; the musical adaptations and the interpretations of these in computer software or adapted devices.

This study demonstrates how personal assistants, technicians (behind the technical applications) and music educators collectively contribute to the enhancement of participants' musical activities. Some personal assistants participated actively in the musicking, others were passive. As demonstrated, the attitude and musical experience of the personal assistant may be one important factor in determining a positive musical outcome for the participant, making the training and education of personal assistants in handling the computerised musical instruments and adapted devices of great importance.

The musical material used, i.e. songs, was often presupposed to be based on the participants' everyday culture. However, many of the songs used during the Music Week project tended to suit the teacher's preferences rather than those of the participants. A similar pattern has been found in Swedish compulsory schools (Sandberg, Heiling & Modin 2005).

Finally

In a new postmodern paradigm of disability, a holistic view of the individual and a focus on function rather than impairment have emerged (Simeonsson 2009). Music can be used in order to promote health and to increase the Sense of Coherence, which according to Antonovsky (1987, 1996) is a dependent variable. It is important to investigate further how musical activities, i.e. musicking, can support and promote health and create an inclusive *musical accessibility*. This kind of inclusive approach places great demands on accessibility in the aesthetic fields in our society and in all types of school and education facilities.

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Suggested citation:

Nilsson, B. (2014). Performance and participation: A qualitative study of music education practices in digitally-based musicking with young people with physical impairments. *Approaches: Music Therapy & Special Music Education, 6*(1), 19-27. Retrieved from http://approaches.primarymusic.gr

ISSN: 1791-9622